REVIEWER INDEX

to Volume 104, May–August, 1983

Below is a list of the people who reviewed manuscripts for GENETICS during the preparation of Volume 104.

The aim of GENETICS is to communicate significant research. To succeed, we must recognize what is significant; we must make sure the presentation is accurate, unambiguous and yet readable. For this, we depend heavily on our reviewers, who perform this indispensible service without reward. The quality of the journal can be no better than the quality of their efforts. We apologize to any reviewer whose name has been inadvertently omitted, and we are sincerely grateful to all.

ADAMS, G. M. W.
ADAMS, J.
AQUADRO, C. F.
ARNOLD, J.
ASMUSSEN, M.
AVERY, P. J.
AVISE, J. C.

BACHVAROVA, R.
BAKER, B.
BAKER, W. K.
BARNES, P. T.
BELOTE, J.
BENNETT, M.D.
BERGER, E.
BINGHAM, P. M.
BIRD, R.
BIRKY, C. W.
BOSWELL, R.
BOYD, J. B.
BRUNS, P. J.
BUSH, G. L.
BYERS, B.

CARLSON, M.
CAVENER, D.
CHAKRABORTY, R.
CHAKRAVARTI, A.
CHALFIE, M.
CHARLESWORTH, D.
CLARK, S.
CROW, J. F.
CURTSINGER, J. W.

DAVIDOW, L.
DENELL, R.
DIEHL, S. R.
DUNCAN, I.
DVORAK, J.

EDGAR, R.
EHRMAN, L.
EISEN, E. J.
ELLSTRAND, N.
EMIGH, T. H.
ENGELS, W. R.
EPSTEIN, C.
ERICKSON, R. P.
ESPOSITO, M.

FALK, C. T.
FELDMAN, J.
FINK, G.
FINNERTY, V.
FLAVELL, R.
FUERST, P.

GENGENBACH, B. G.
GILBERT, D.
GOLDING, G. B.
GRIFFITHS, R. C.
GUSTAFSON, P. J.

HABER, J.
HABER, M.
HALL, J.
HALL, M. N.
HART, G. E.
HAY, D. A.
HEDRICK, P.
HILL, W. G.
HINTON, C.
HIRAIZUMI, Y.
HOLSINGER, K.
HOWELL, N.
HUDSON, R.

JAENIKE, J.
JINKS, J. L.

KANKEL, D.
KEMBLE, R.
KEMPER, B.
KESSIN, R. H.
KIDWELL, J. F.
KIDWELL, M.
KIRKMAN, H. N.
LACKS, S. A.
LANDE, R.
LAURIE-AHLBERG, C. C.
LI, W.-H.
LOW, B.

MAGUIRE, M. P.
MARGOLSKEE, J.
MARONI, G.
MCDONALD, J.
MCKEOWN, M.
MOENS, P. B.
MORGAN, W. F.
MUELLER, L. D.

NAGYLAKI, T.
NANNEY, D. L.
NICKLAS, B.
NORDSKOG, A. W.
NORMAN, R.
NUR, U.

O'DONNELL, J.
OHTA, T.
OLSON, M.
ORIAS, E.

PAMILO, P.
PETES, T.
PHILLIPS, R. L.
POULSON, D.
POWERS, D.
PREER, J. R.
PRINGLE, J.

RAWSON, J. R. Y.
REYNOLDS, J.
RIPLEY, L. S.
RITLAND, K.
RUDKIN, G. T.

SCHAFFER, H. E.
SCHOEN, D.
SCOTT, A. F.

Sears, E. R.
Sibley, C.
Simchen, G.
Simmons, G. M.
Siniscalco, M.
Smouse, P.
Spieth, P. T.
Stephens, J. C.
Szauter, P.

Templeton, A.
Tracey, M. L.
Turner, M.

Wakimoto, B.
Watt, W.
Watterson, G. A.
Weisberg, R.
Whittam, T. A.
Williamson, D. L.
Wiseman, A.
Womack, J. E.
Woodruff, R. C.
Wu, C.-I.
Wyatt, R.

Zurawski, G.

AUTHOR INDEX

to Volume 104, May–August, 1983

Ames, G. F.-L., 381
Ashburner, M., 405

Boerwinkle, E., 661
Brewer, G. J., 661
Brookfield, J. F. Y., 457, 485
Bruns, P. J., 257
Brussard, T. B., 257
Buchanan, B. A., 301

Cann, R. L., 699
Carson, H. L., 353
Clark, R. L., 661
Cochran, D. G., 215

DeCelles, N. L., 433
Detwiler, C., 405
Driscoll, C. J., 181

Eaton, N. R., 219
Ehrman, L., 713
Enlow, T. C., 433

Game, J. C., 583, 603
Ginzburg, L. R., 191
Giraldez, R., 677
Golding, G. B., 513
Goodman, M. M., 365
Gruenspan, H., 219

Hartl, D. L., 343
Hawley, R. S., 63
Haymer, D. S., 343
Hedrick, P. W., 449
Helmi, S., 23
Herman, G., 571
Hinton, C. W., 95
Hiwatashi, K., 41
Horvitz, H. R., 619
Hossain, M. A., 181
Hourcade, D. E., 391
Hunt, J. A., 353

Johnson, D. L. E., 301

Kakar, S. N., 241
Kaplan, N., 457
Kaplan, N. L., 485
Kasbekar, D. P., 271
Katz, E. R., 271
Kelley, M. R., 279
Kidwell, M. G., 317
Koana, T., 113
Kobayashi, I., 549
Kratzer, P. G, 685

Lacy, R. C., 81
Lamb, B. C., 23
Langley, C. H., 457, 473
Lanza, G. M., 123
Leach, D., 549
Lee, W. R., 279
Leonard, J. E., 713
Levings, C. S., III, 365
Liu, W., 133

Madigan, S., 271
Magee, P. T., 241
Maguire, M. P., 173
Manney, T. R., 235
Marks, H. L., 123
McLellan, T., 381
Meade, J. H., 235
Merriam, E. V., 257
Meselson, M., 571
Minagawa, T., 1
Miyake, T., 113
Miyazaki, J., 1
Modrich, P., 571
Montgomery, E. A., 473

Neel, J. V., 133
Nikaido, K., 381

Ogihara, Y., 155
Orellana, J., 677

Paietta, J., 11
Partridge, R. M., 241
Peterson, J., 571
Pollak, E., 531
Pukkila, P. J., 571

Resnick, M. A., 583, 603
Rickards, G. K., 211
Rosen, L., 649
Ryo, Y., 1

Santos, J. L., 677
Sargent, M. L., 11
Shroyer, D. A., 649
Sing, C. F., 661
Smouse, P. E., 133
Stahl, F. W., 549
Stahl, M. M., 549
Stasiewicz, S., 583, 603
Strobeck, C., 513

Takahata, N., 497
Tartof, K. D., 63
Thomson, G., 449
Timothy, D. H., 365
Trent, C., 619
Tsubota, S., 405
Tsukii, Y., 41
Tsunewaki, K., 155
Tsung, N., 619
Turelli, M., 191

Washburn, K. W., 123
Weissinger, A. K., 365
White, K., 433
Wilson, A. C., 699
Woodruff, R. C., 405
Wyatt, R. D., 123

SUBJECT INDEX

to Volume 104, May–August, 1983

Adh, *Drosophila melanogaster*, 405
Aegilops, phylogeny, 155
Aflatoxin, dietary effect, chickens, 123
Alcohol, phenethyl, sensitivity, *Saccharomyces cerevisiae*, 235
Allele, frequency changes, 531
Allozyme, variation, between populations, Drosophila, 81
Alternate-2
  disjunction, German cockroach, 215
  orientation, interchange quadrivalents, 211
Ascobolus immersus, 11
Autosome, compound, *Drosophila melanogaster*, 343
Auxotroph, yeast, 241
Aves, 123

Bacteriophage
  lambda, 549, 571
  T4, 1
Biomass, *Drosophila melanogaster*, 343
Bleomycin, *Chlamydomonas reinhardi*, 391

Caenorhabditis elegans, 619
Candida albicans, 241
Carbon dioxide, sensitivity, *Culex quinquefasciatus*, 649
Chi (χ), bacteriophage λ, 549
Chicken, 123
Chlamydomonas reinhardi, marker rescue and bleomycin effects, 391
Chloroplast, DNA, Triticum and Aegilops, 155
Chromosome
  arm, length, function, maize, 173
  orientation, interchange quadrivalents, 211
  rye, wheat, 181
  X, activity, mouse, 685
Cockroach, German, 215
Conidiation, circadian, photosuppression, *Neurospora crassa*, 11
Copia-like element, distribution, *Drosophila melanogaster*, 473
Coumarin, sensitivity, *Dictyostelium discoideum*, 271
Cross, intersyngenic, *Paramecium caudatum*, 41
Crossing over, mutability and, males, genetic controls, *Drosophila ananassae*, 95
Culex quinquefasciatus, 649
Culture, embryo, single, Drosophila, 113

Deletion analysis, *Drosophila melanogaster*, 405
Dictyostelium discoideum, 271
Differentiation, spatial and temporal, Drosophila, 81
Disjunction
  alternate-2, 211
    German cockroach, 215
DNA
  bacteriophage, packaging, 549
  chloroplast, Triticum and Aegilops, 155
  hybridization, Drosophila, 353
  mismatch repair, bacteriophage λ, 571
  mitochondrial
    human, 699
    racial groups, maize, 365
  polymorphism, human, 699
  repair, *Drosophila melanogaster*, 63
  synthesis, *Drosophila melanogaster* oocytes, 279
Drosophila, 113, 381
  ananassae, 95
  Hawaiian, 353
  melanogaster, 63, 301, 343, 405, 473
    development, 443
    hybrid dysgenesis, 317
    oocyte mutagenesis, 279
  mercatorum, 661
  mycophagy, 81
  pseudoobscura, 713

Electrophoresis
  protein and calibration, Drosophila, human, 381
  variation, "hidden," *Drosophila melanogaster*, 301
Embryo, single, culture, Drosophila, 113
Enzyme, polymorphism, *Drosophila mercatorum*, 661
Escherichia coli, 571
Evolution
  Drosophila, 353
  transposable elements, 457
Excision repair, *Saccharomyces cerevisiae*, 583, 603

Fertility, Cornerstone compensation, wheat, 181

Finite Island model, 497
Fitness
  estimation and components, *Drosophila melanogaster*, 343
  induced, heterozygosity consequences, 191

Gel, two-dimensional, electrophoresis, Drosophila, human, 381
Gene
  49, recombination effect, 1
  conversion
    controlling factors, *Ascobolus immersus*, 23
    phage λ, *Escherichia coli*, 571
  locus, interactions, *Ascobolus immersus*, 23
  ribosomal (rDNA), *Drosophila melanogaster*, 63
  uvsX, gene 49 mutation suppression, 1
Glycolysis, *Drosophila mercatorum*, 661
αGPD, *Drosophila mercatorum*, 661
α-GPDH, electrophoresis, Drosophila, 381
Grasshopper, 677

Hardy-Weinberg equilibrium, 133
Hemoglobin, electrophoresis, human, 381
Heterozygosity, fitness and, 191
Heterozygote, translocation, German cockroach, 215
HLA, 449
Homologue, pairing, meiotic, maize, 173
Homo sapiens, 449
Homozygosity, variance, 513
Host, race formation, Drosophila, 81
Human, 133, 381, 699
Hybrid, dysgenesis, *Drosophila melanogaster*, 317
Hybridization, DNA, Drosophila, 353

Inheritance, extrachromosomal, *Culex quinquefasciatus*, 649

Karyotype, *Tetrahymena thermophila*, 257

Light
  blue, responses, *Neurospora crassa*, 11
  insensitive (*lis*), *Neurospora crassa*, 11
  ultraviolet, *Saccharomyces cerevisiae*, 583, 603
Locus, complex, *Drosophila melanogaster*, 405

Maize, 173, 365
Male, rare advantage, *Drosophila pseudoobscura*, 713
Marker, rescue, *Chlamydomonas reinhardi*, 391
Mating
  behavior, *Drosophila pseudoobscura*, 713
  type
    Paramecium caudatum, 41
    Saccharomyces cerevisiae, 219
  typeless, Paramecium clones, 41
mei-41, *Drosophila melanogaster*, 63
Meiosis
  German cockroach, 215
  pairing, rye and grasshopper, 677
  Saccharomyces cerevisiae, 583, 603
Methyl-directed DNA mismatch repair, 571
Mismatch repair, bacteriophage λ, 571
Mitochondria
  DNA
    Drosophila melanogaster oocytes, 279
    human, 699
    racial groups, maize, 365
Monosomic, *Tetrahymena thermophila*, 257
Mosquito, 649
Mouse, 685
Mutability, crossing over and, genetic controls, *Drosophila ananassae*, 95
Mutagen, chemical, *Drosophila melanogaster* oocytes and, 279
Mutagenesis, Drosophila, oocytes, 279
Mutant
  aromatic amino acid, *Saccharomyces cerevisiae*, 235
  meiotic, *Drosophila melanogaster*, 63
  phenethyl alcohol-sensitive, *Saccharomyces cerevisiae*, 235
  photosensitivity, *Neurospora crassa*, 11
Mutation, length, human, 699

Neurogenetics, *Caenorhabditis elegans*, 619
Neurospora crassa, 11
Nuclear order, maize, 173
Nullisomic, mapping, *Tetrahymena thermophila*, 257
Nystatin, resistance, *Dictyostelium discoideum*, 271

Oocyte, DNA synthesis, *Drosophila melanogaster*, 279

Pairing, meiotic, rye and grasshopper, 677
Paramecium caudatum, 41
Parasexual genetics, *Dictyostelium discoideum*, 271
Photosensitivity, mutants, *Neurospora crassa*, 11
Photosuppression, circadian conidiation, *Neurospora crassa*, 11
Polymorphism
  DNA, human, 699
  enzyme, *Drosophila mercatorum*, 661
Population
  effective size, 531
  genetics, 513
  Mendelian, 457
  subdivided, 513
  theory, 457, 485
Product, maternal, mouse, 685
Productivity, *Drosophila melanogaster*, 343
Protein, variation and electrophoresis, Drosophila, human, 381

Quadrivalent, interchange, chromosome orientation, 211

Race, host, formation, Drosophila, 81
recA, bacteriophage λ, 549
recBC, bacteriophage λ, 549
Recombination
  bacteriophage λ, 549
  meiotic, control, *Ascobolus immersus*, 23
  Saccharomyces cerevisiae, 583, 603
  T4 gene 49 mutant, 1
Recombinator, bacteriophage λ, 549
Repair
  DNA, *Drosophila melanogaster*, 63
  excision, *Saccharomyces cerevisiae*, 583, 603
  mismatch, bacteriophage λ, 571
  postreplication, *Saccharomyces cerevisiae*, 603
Resistance, genetic, chickens, 123
Restriction
  analysis, human, 699
  fragment pattern, Triticum and Aegilops, 155
Rye, 677
  chromosomes, wheat, 181

Saccharomyces
  cerevisiae, 235, 583, 603
    mating-type, 219
Scutoid, mutation, *Drosophila melanogaster*, 405
Selection
  balancing, *Homo sapiens*, 449
  multilocus, theory, 191
Sex, -specific symptom, Drosophila, 113
Sex Ratio Organism, effect, Drosophila, 113
Speciation, sympatric, Drosophila, 81
Sterility, male, nuclear, wheat, 181

Telomere, function and associations, maize, 173
Tetrahymena thermophila, karyotype, 257
Theory
  neutral, 513
    Homo sapiens, 449
Translocation, heterozygotes, German cockroach, 215
Transposable element, 473
  evolution, 457
  population, theory, 485

UDS, Drosophila oocytes, 279

Variation, genetic, *Homo sapiens*, 449
Virus, insect, *Culex quinquefasciatus*, 649

Wheat
  plasma type and phylogeny, 155
  rye and, chromosomes, 181
Wing, clipping, *Drosophila pseudoobscura*, 713

Xanthine dehydrogenase, *Drosophila melanogaster*, 301

Yeast, 219, 235, 583, 603
  auxotrophs, 241

TABLE OF CONTENTS

to Volume 104, May–August, 1983

ASHBURNER, M., C. DETWILER, S. TSUBOTA and R. C. WOODRUFF, The genetics of a small autosomal region of *Drosophila melanogaster* containing the structural gene for alcohol dehydrogenase. VI. Induced revertants of Scutoid 405–431

BRUNS, P. J., T. B. BRUSSARD and E. V. MERRIAM, Nullisomic Tetrahymena. II. A set of nullisomics define the germinal chromosomes 257–270

BUCHANAN, BARBARA ANN and DIANA L. E. JOHNSON, Hidden electrophoretic variation at the xanthine dehydrogenase locus in a natural population of *Drosophila melanogaster* 301–315

CANN, R. L. and A. C. WILSON, Length mutations in human mitochondrial DNA 699–711

CLARK, R. L., ERIC BOERWINKLE, G. J. BREWER and C. F. SING, Studies of enzyme polymorphism in the Kamuela population of *Drosophila mercatorum*. III. Effects of variation at the *αGPD* locus and subflight stress on the energy charge and glycolytic intermediate concentrations 661–675

COCHRAN, DONALD G., Alternate-2 disjunction in the German cockroach 215–217

GOLDING, G. B. and C. STROBECK, Variance and covariance of homozygosity in a structured population 513–529

GRUENSPAN, HARRY and NORMAN R. EATON, A mutation allowing expression of normally silent a mating-type information in *Saccharomyces cerevisiae* . 219–234

HAWLEY, R. SCOTT and KENNETH D. TARTOF, The effect of *mei-41* on rDNA redundancy in *Drosophila melanogaster* 63–80

HAYMER, D. S. and D. L. HARTL, The experimental assessment of fitness in Drosophila. II. A comparison of competitive and noncompetitive measures 343–352

HEDRICK, PHILIP W. and GLENYS THOMSON, Evidence for balancing selection at HLA 449–456

HELMI, SHAKER and BERNARD C. LAMB, The interactions of three widely separated loci controlling conversion properties of *w* locus I in *Ascobolus immersus* 23–40

HINTON, CLAUDE W., Relations between factors controlling crossing over and mutability in males of *Drosophila ananassae* 95–112

HOSSAIN, M. A. and C. J. DRISCOLL, Fertility compensation of Cornerstone male sterility of wheat by rye 181–189

HOURCADE, DENNIS E., Marker rescue from bleomycin-treated *Chlamydomonas reinhardi* 391–404

HUNT, JOHN A. and HAMPTON L. CARSON, Evolutionary relationships of four species of Hawaiian Drosophila as measured by DNA reassociation 353–364

KAKAR, S. N., R. M. PARTRIDGE and P. T. MAGEE, A genetic analysis of *Candida albicans*: isolation of a wide variety of auxotrophs and demonstration of linkage and complementation 241–255

KAPLAN, NORMAN L. and JOHN F. Y. BROOKFIELD, Transposable elements in Mendelian populations. III. Statistical results 485–495

KASBEKAR, DURGADAS P., SANFORD MADIGAN and EUGENE R. KATZ, Use of nystatin-resistant mutations in parasexual genetic analysis in *Dictyostelium discoideum* 271–277

KELLEY, MARK R. and WILLIAM R. LEE, Mutagenesis in oocytes of *Drosophila melanogaster*. I. Scheduled synthesis of nuclear and mitochondrial DNA and unscheduled DNA synthesis 279–299

KIDWELL, MARGARET G., Hybrid dysgenesis in *Drosophila melanogaster*: factors affecting chromosomal contamination in the *P-M* system 317–341

KOANA, TAKAO and TADASHI MIYAKE, Effects of the Sex Ratio Organism on *in vitro* differentiation of Drosophila embryonic cells 113–122

KOBAYASHI, ICHIZO, MARY M. STAHL, DAVID LEACH and FRANKLIN W. STAHL, The interaction of *cos* with Chl is separable from DNA packaging in *recA-recBC*-mediated recombination of bacteriophage lambda 549–570

KRATZER, PAUL G., Expression of maternally and embryonically derived hypoxanthine phosphoribosyl transferase (HPRT) activity in mouse eggs and early embryos 685–698

LACY, ROBERT C., Structure of genetic variation within and between populations of mycophagous Drosophila 81–94

LANGLEY, CHARLES H., JOHN F. Y. BROOKFIELD and NORMAN KAPLAN, Transposable elements in Mendelian populations. I. A theory 457–471

LANZA, G. M., K. W. WASHBURN, R. D. WYATT and H. L. MARKS, Effect of dietary aflatoxin concentration on the assessment of genetic variability of response in a randombred population of chickens 123–131

MAGUIRE, MAJORIE P., Homologous chromosome pairing remains an unsolved problem: a test of a popular hypothesis utilizing maize meiosis 173–179

MCLELLAN, TRACY, GIOVANNA FERRO-LUZZI AMES and KISHIKO NIKAIDO, Genetic variation in proteins: comparison of one-dimensional and two-dimensional gel electrophoresis 381–390

MEADE, JAMES H. and THOMAS R. MANNEY, Sensitivity of tryptophan, tyrosine and phenylalanine mutants of *Saccharomyces cerevisiae* to phenethyl alcohol 235–240

MIYAZAKI, JUNICHI, YEIKOU RYO and TEIICHI MINAGAWA, Involvement of gene 49 in recombination of bacteriophage T4 1–9

MONTGOMERY, ELIZABETH A. and CHARLES H. LANGLEY, Transposable elements in Mendelian populations. II. Distribution of three *copia*-like elements in a natural population of *Drosophila melanogaster* 473–483

PAIETTA, JOHN and MALCOLM SARGENT, Isolation and characterization of light-insensitive mutants of *Neurospora crassa* 11–21

POLLAK, EDWARD, A new method for estimating the effective population size from allele frequency changes 531–548

PUKKILA, PATRICIA J., JANET PETERSON, GAIL HERMAN, PAUL MODRICH and MATTHEW MESELSON, Effects of high levels of DNA adenine methylation on methyl-directed mismatch repair in *Escherichia coli* 571–582

RESNICK, MICHAEL A., STANLEY STASIEWICZ and JOHN C. GAME, Meiotic DNA metabolism in wild-type and excision-deficient yeast following UV exposure 583–601

RESNICK, MICHAEL A., JOHN C. GAME and STANLEY STASIEWICZ, Genetic effects of UV irradiation on excision-proficient and -deficient yeast during meiosis 603–618

RICKARDS, GEOFFREY K., Alternate-1 and alternate-2 orientations in interchange (reciprocal translocation) quadrivalents 211–213

SANTOS, J. L., J. ORELLANA and R. GIRALDEZ, Pairing competition between identical and homologous chromosomes in rye and grasshoppers 677–684

SHROYER, DONALD A. and LEON ROSEN, Extrachromosomal inheritance of carbon dioxide sensitivity in the mosquito *Culex quinquefasciatus* 649–659

SMOUSE, PETER E., JAMES V. NEEL and WANDA LIU, Multiple-locus departures from panmictic equilibrium within and between village gene pools of Amerindian tribes at different stages of agglomeration 133–153

TAKAHATA, NAOYUKI, Gene identity and genetic differentiation of populations in the finite island model 497–512

TRENT, CAROL, NANCY TSUNG and H. ROBERT HORVITZ, Egg-laying defective mutants of the nematode *Caenorhabditis elegans* 619–647

TSUKII, YUUJI and KOICHI HIWATASHI, Gene controlling mating-type specificity in *Paramecium caudatum*: three loci revealed by intersyngenic crosses .. 41–62

TSUNEWAKI, KOICHIRO and YASUNARI OGIHARA, The molecular basis of genetic diversity among cytoplasms of *Triticum* and *Aegilops* species. II. On the origin of polyploid wheat cytoplasms as suggested by chloroplast DNA restriction fragment patterns 155–171

TURELLI, MICHAEL and LEV R. GINZBURG, Should individual fitness increase with heterozygosity? 191–209

WEISSINGER, A. K., D. H. TIMOTHY, C. S. LEVINGS, III and M. M. GOODMAN, Patterns of mitochondrial DNA variation in indigenous maize races of Latin America 365–379

WHITE, KALPANA, NORMAND L. DECELLES and THOMAS C. ENLOW, Genetic and developmental analysis of the locus *vnd* in *Drosophila melanogaster* 433–448